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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,692	11/29/2001	Mikhail Boroditsky	003493.00347	4952

22907 7590 12/28/2004

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EXAMINER	
PAYNE, DAVID C	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,692	BORODITSKY ET AL.	
	Examiner	Art Unit	
	David C. Payne	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19* is/are allowed.

6)☒ Claim(s) *1-3,5,7-18,20-31 and 36* is/are rejected.

7)☒ Claim(s) *4,6,32-35 and 37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4 October 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. It is the Examiner's understanding that the applicant' "composite packet" is consistent with how one of ordinary skill in the art would understand the term. It is understood that the applicant is allowed to be his own lexicographer and in this case the applicant has defined his use of the term. However, the idea of a composite packet implies that a packet is a heterogeneous composition of bits, or wavelengths, etc. In the applicant's case, a packet is homogenous construction of bits in a single wavelength. The applicant has merely aligned packets on a unique wavelength into the same time-slot. This is to say, any given packet comprises bits of a single bit stream and wavelength; hence, no patentable weight can be assigned the term "composite packet". Furthermore, the idea of a stacker and unstacker is merely a multiplexer/demultiplexer of a WDM signal transporting packets.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5, 7-18, 20-31, and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsushima et al. US 5,600,466 (Tsushima) in view of Chlamtac, I et al., "Scalable WDM Access Network Architecture based on Photonic Slot Routing,"

IEEE/ACM Trans. On Networking, IEEE Inc. NY, US Vol. 7, No. February 1999 (Chlamtac).

Re claims 1-3, 5, and 7-12, Tsushima disclosed a WDM ring and node system with a multiplicity of lasers (6 of Figure 6) that create packets parallel packets (see Figure 47) at different time-slots. Tsushima does not disclose:

A system for providing high connectivity communications over a packet-switched optical ring network comprising: a core optical ring having at least one node, said node being coupled to a subtending system by an optical crossbar switch; a tunable laser for generating a set of serial packets; a stacker for forming a first composite packet from said set of serial packets, said stacker coupled to said optical crossbar switch, and said stacker further coupled to said tunable laser; said first composite packet being parallel packets in a single photonic time slot, said first composite packet to be added to said core optical ring in a vacant photonic time slot via said optical crossbar switch; a second composite packet propagating on said core optical ring destined to be dropped at said node for further distribution on said subtending system via said optical crossbar switch; an unstacker for serializing said second composite packet dropped at said node, said unstacker coupled to said optical crossbar switch; and a detector for distributing said serialized packets to a further destination by said subtending system.

Chlamtac disclosed a interconnecting rings with bridges or switches (see Figure 1). It would have been obvious interconnect rings in the Tsushima reference as does Chlamtac so that multiple metropolitan ring networks could share traffic. Furthemore, Tsushima acknowledged the practice of using tunable lasers in the prior art and would therefore prove obvious to one of ordinary skill in the art at the time of invention to practice previously disclosed inventions.

Re claims 13—18 and 20 Tsushima disclosed a WDM ring and node system with a multiplicity of lasers (6 of Figure 6) that create packets parallel packets (see Figure 47) at different time-slots. Tsushima does not disclose:

A system for providing high connectivity communications over a packet-switched optical ring network comprising: a core optical ring having at least one node, said node being coupled to a subtending system by an optical crossbar switch; a device for forming a first composite packet formed by a set of packets generated in parallel by an array of lasers, said device coupled to said optical crossbar switch; said first composite packet being parallel packets in a single photonic time slot, said first composite packet to be added to said core optical ring in a vacant photonic time slot via said optical crossbar switch; a second composite packet propagating on said core optical ring destined to be dropped at said node for further distribution on said subtending system via said optical crossbar switch; an unstacker for serializing said second composite packet dropped at said node, said unstacker coupled to said optical crossbar switch; and a detector for distributing said serialized packets to a further destination by said subtending system.

Chlamtac disclosed a interconnecting rings with bridges or switches (see Figure 1). It would have been obvious interconnect rings in the Tsushima reference as does Chlamtac so that multiple metropolitan ring networks could share traffic. Furthemore, Tsushima acknowledged the practice of using tunable lasers in the prior art and would therefore prove obvious to one of ordinary skill in the art at the time of invention to practice previously disclosed inventions.

Re claims 21-31 and 36 Tsushima disclosed a WDM ring and node system with a multiplicity of lasers (6 of Figure 6) that create packets parallel packets (see Figure 47) at different time-slots. Tsushima does not disclose:

A system for providing high connectivity communications over an optical ring network comprising: a core optical ring having at least one node, said node being coupled to a subtending system by an optical crossbar switch; a source for generating a set of serial packets; a stacker for forming a first composite packet from said set of serial packets, said stacker coupled to said optical crossbar switch, and said stacker further coupled to said source; said first composite packet being parallel packets in a single photonic time slot, said first composite packet to be added to said core optical ring in a vacant photonic time slot via said optical crossbar switch; a second composite packet traveling around said core optical ring destined to be dropped at said subtending system for further distribution via said optical crossbar switch; and an unstacker for serializing said second composite packet dropped at said subtending system, said unstacker coupled to said optical crossbar switch.

Chlamtac disclosed a interconnecting rings with bridges or switches (see Figure 1). It would have been obvious interconnect rings in the Tsushima reference as does Chlamtac so that multiple metropolitan ring networks could share traffic. Furthermore, Tsushima acknowledged the practice of using tunable lasers in the prior art and would therefore prove obvious to one of ordinary skill in the art at the time of invention to practice previously disclosed inventions.

Allowable Subject Matter

4. Claim 19 is allowed.

5. Claims 4, 6, 32-35, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

David C. Payne 12/23/04

David C. Payne
Patent Examiner
AU 2633